

LOCTITE STYCAST ES 0397

November 2016

PRODUCT DESCRIPTION

LOCTITE STYCAST ES 0397 provides the following product characteristics:

Technology	Epoxy
Appearance, Resin (Component A)	Black
Appearance, Hardener (Component B)	Off-white
Appearance (cured)	Black
Components	Two components - requires mixing
Mix Ratio, by volume - Part A: Part B	100 : 100
Mixing Ratio, by weight Component A: Component B	100 : 95
Cure	Heat cure
Application	Casting

LOCTITE STYCAST ES 0397 is a two-component heat cured casting system designed for the insulation of various types of transformers. LOCTITE STYCAST ES 0397 is suitable for bulk casting applications.

TYPICAL PROPERTIES OF UNCURED MATERIAL

Part A Properties

Filler Content, %	61
Density, @ 25 °C, g/cm ³	1.71
Viscosity, Brookfield - RVF, cps:	
Spindle 7, speed 10 rpm, @ 25°C	370,000
Spindle 3, speed 10 rpm, @ 80°C	7,000

Part B Properties

Filler Content, %	63
Density, @ 25 °C, g/cm ³	1.61
Viscosity, Brookfield - RVF, 25 °C, mPa·s (cP):	
Spindle 7, speed 10 rpm	15,500
Spindle 4, speed 10 rpm	3,000

Mixed Properties

Pot Life @ 25 °C, hours:	
200 g mass	20
Peak Exotherm Temperature, °C:	
200 g mass	90
Gel Time 125 °C, minutes	30
Viscosity, Brookfield - RVF, cps:	
Spindle 7, speed 20 rpm, @ 25°C	57,000

TYPICAL CURING PERFORMANCE

Recommended Curing Conditions

3 hours @ 80 °C (Recommended cure)

The above cure profile is a guideline recommendation. Cure conditions (time and temperature) may vary based on customers' experience and their application requirements, as well as customer curing equipment, oven loading and actual oven temperatures.

TYPICAL PROPERTIES OF CURED MATERIAL

Physical Properties :

Coefficient of Linear Thermal Expansion, in/in/°C (-40 to 20°C)	41×10 ⁻⁶
Coefficient of Linear Thermal Expansion, in/in/°C (40 to 60°C)	128×10 ⁻⁶
Glass Transition Temperature (Tg), °C	4
Compressive Strength, psi	8,800
Linear Shrinkage, %	0.53
Flammability, 6mm, 94V-0	Passes
Flammability, 3mm, 94HB	Passes
Hardness, Shore D	75
Tensile Strength, psi	1,350
Elongation, %	26
Specific Gravity	1.72
Thermal Conductivity, cal/cm-sec-°C	18×10 ⁻⁴
Flexural Strength, psi	1,020
Moisture Absorption, 24 hrs immersion, %	0.23

Electrical Properties:

Dielectric Strength, 20 mil thickness, volts/mil	1,280
Arc Resistance, seconds	220
Dielectric Constant / Dissipation Factor @ 25°C:	
100 Hz	6.0 / 0.06
1 kHz	5.6 / 0.048
10 kHz	5.4 / 0.042
100 kHz	5.2 / 0.037
Dielectric Constant / Dissipation Factor @ 105°C:	
100 Hz	7.1 / 0.054
1 kHz	6.7 / 0.032
10 kHz	6.5 / 0.017
100 kHz	6.5 / 0.029
Volume Resistivity, ohm-cm	4×10 ¹⁴
Volume Resistivity, ohm-cm @ 105°C	3×10 ¹²
Surface Resistivity, ohms	2×10 ¹⁵
Surface Resistivity, ohms @ 105°C	3×10 ¹²

GENERAL INFORMATION

For safe handling information on this product, consult the Safety Data Sheet, (SDS).

Not for product specifications

The technical data contained herein are intended as reference only. Please contact your local quality department for assistance and recommendations on specifications for this product.

STORAGE:

Store product in the unopened container in a dry location. Storage information may be indicated on the product container labeling.

Optimal Storage: 8 °C to 21 °C. Storage below 8 °C or greater than 28 °C can adversely affect product properties.

Material removed from containers may be contaminated during use. Do not return product to the original container. Henkel Corporation cannot assume responsibility for product which has been contaminated or stored under conditions other than those previously indicated. If additional information is required, please contact your local Technical Service Center or Customer Service Representative.

Conversions

$(^{\circ}\text{C} \times 1.8) + 32 = ^{\circ}\text{F}$

$\text{kV/mm} \times 25.4 = \text{V/mil}$

$\text{mm} / 25.4 = \text{inches}$

$\text{N} \times 0.225 = \text{lb}$

$\text{N/mm} \times 5.71 = \text{lb/in}$

$\text{psi} \times 145 = \text{N/mm}^2$

$\text{MPa} = \text{N/mm}^2$

$\text{N}\cdot\text{m} \times 8.851 = \text{lb}\cdot\text{in}$

$\text{N}\cdot\text{m} \times 0.738 = \text{lb}\cdot\text{ft}$

$\text{N}\cdot\text{mm} \times 0.142 = \text{oz}\cdot\text{in}$

$\text{mPa}\cdot\text{s} = \text{cP}$

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